

### 1.13.15

**Obj:** To find missing vertical angles.

#### **(0-10) Do Now:**

2. Solve:

a.  $5x + 4 = 3x - 8$  ( $x = -6$ )

b.  $12y - 11 = 6y + 7$  ( $y = 3$ )

CHALLENGE: Three angles of a triangle are:  $x$ ,  $x + 10$  and  $x + 50$ . All three angles of any triangle add to 180. Find  $x$ . ( $x = 40$ )

#### **(10-15) HW Check**

#### **(15-25) Notes: Vertical Angles**

Vertical angles: angles across from each other when formed by intersecting lines (have students draw)

Vertical angles are congruent (equal).

Ex 1:  $2x + 11$  and  $4x + 5$

Find  $x$  and the measures of the angles.

#### **(25-35) Worksheet: Vertical Angles**

#### **(35-40) Exit Slip**

1. What are vertical angles?

CHALLENGE:  $4(y + 8) = 2y + 12 + y + 40$  (with vertical angles)

$y = 20$ , angles = 112 degrees

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Obj: \_\_\_\_\_

**1. Take out HW, pencil, planner and binder. Copy HW in planner. Leave out to be checked.**

2. Solve:

a.  $5x + 4 = 3x - 8$

b.  $12y - 11 = 6y + 7$

CHALLENGE: Three angles of a triangle are:  $x$ ,  $x + 10$  and  $x + 50$ . All three angles of any triangle add to 180. Find  $x$ .

### Notes: Vertical Angles

**Vertical angles:** angles \_\_\_\_\_ from each other when formed by  
\_\_\_\_\_ lines.

Vertical angles are \_\_\_\_\_ (\_\_\_\_\_).

**Sample Vertical Angles (you draw below):**

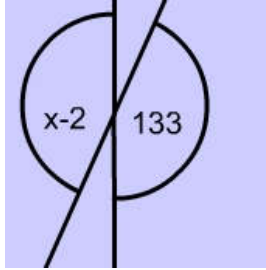
**Example 1:**

Name: \_\_\_\_\_

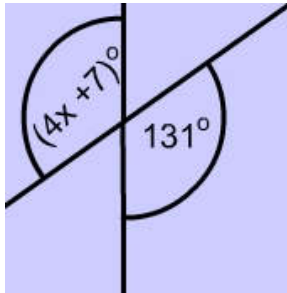
Date: \_\_\_\_\_

**Vertical Angles Worksheet: Show all work and box final answers.**

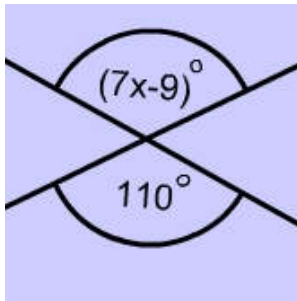
1. Find the value of  $x$ .



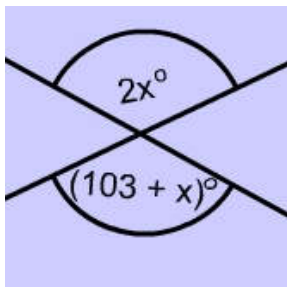
2. Find the value of  $x$ .



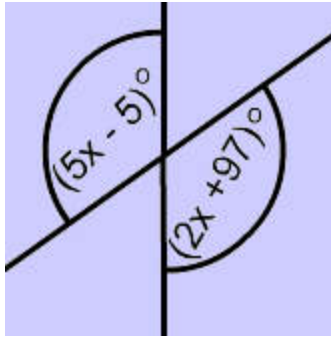
3. Find the value of  $x$ .



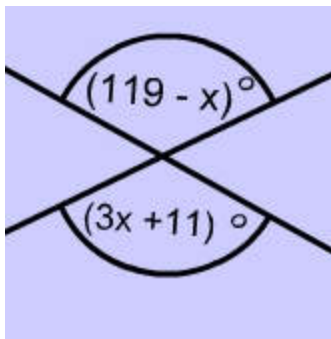
4. Find the value of  $x$  and the measure of each vertical angle.



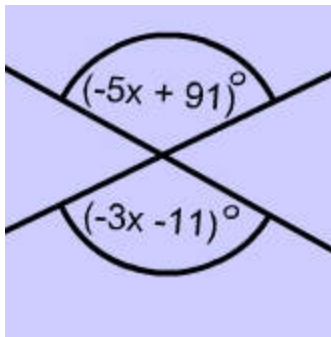
5. Find the value of  $x$  and the measure of each vertical angle.



6. Find the value of  $x$  and the measure of each vertical angle.



7. Find the value of  $x$ .



8. Find the value of  $x$ .

